

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Coram:**

1. Shri Ashok Basu, Chairperson
2. Shri K.N. Sinha, Member
3. Shri Bhanu Bhushan, Member
4. Shri A.H. Jung, Member

**Review Petition No. 189/2004**

**IN THE MATTER OF**

Review Petition against the order dated 6.9.2004 of the Commission in Petition no. 13/2004 of PGCIL.

**AND IN THE MATTER OF**

Assam State Electricity Board

**..Petitioner**

Vs

1. Power Grid Corporation of India Ltd., New Delhi
  2. North Eastern Regional Electricity Board, Shillong
  3. North Eastern Electric Power Corporation of India Ltd., Shillong
  4. National Hydroelectric Power Corporation Ltd., Faridabad
  5. Meghalaya State Electricity Board, Shillong
  6. Department of Power, Govt. of Tripura, Agartala
  7. Department of Power, Govt of Arunachal Pradesh, Itanagar
  8. Electricity Department, Govt. of Manipur, Imphal
  9. Power and Electricity Department, Govt of Mizoram, Aizawl
  10. Department of Power, Govt. of Nagaland, Kohima
- ..Respondents**

**Petition No. 2/2005**

**IN THE MATTER OF**

Review Petition on the order dated 6.9.2004 of the Commission in Petition No.13/2004 of PGCIL in respect of calculation of PGCIL transmission tariff for post ABT period from 1.11.2003.

**And in the matter of**

North Eastern Electric Power Corpn. Ltd.

**....Petitioner**

Vs

1. Power Grid Corporation of India Ltd., New Delhi
  2. Assam State Electricity Board, Guwahati
  3. Meghalaya State Electricity Board, Shillong
  4. Department of Power, Govt. of Tripura, Agartala
  5. Power and Electricity Department, Govt. of Mizoram, Aizawl
  6. Electricity Department, Govt. of Manipur, Imphal
  7. Department of Power, Govt. of Arunachal Pradesh, Itanagar
  8. Department of Power, Govt. of Nagaland, Kohima
  9. National Hydroelectric Power Corporation Ltd., Faridabad
  10. North Eastern Regional Load Despatch Centre, Shillong
  11. North Eastern Regional Electricity Board, Shillong
- .... Respondents**

**The following were present:**

1. Shri K.Goswami, AEE, ASEB
2. Shri B.M. Saikia, AEE, ASEB
3. Shri L.M.F. Suhtun, EE, MeSEB
4. Shri H.M. Sharma, ASEB
5. Shri R.T. Agarwal, PGCIL
6. Shri M.M. Mondal, PGCIL
7. Shri P.C. Pankaj, PGCIL
8. Shri U.K. Tyagi, PGCIL
9. Shri C. Kannan, PGCIL
10. Shri A.K. Srivastava, DM, NHPC
11. Shri A. Ray, Engineer, NHPC

**ORDER  
(DATE OF HEARING: 04.08.2005)**

The petitioners in both these petitions primarily seek review of the Commission's order dated 6.9.2004 in Petition No. 13/2004. Before proceeding to deal with the contentions of the parties, it would be worthwhile to first briefly peruse background of the case.

2. The transmission tariff in North-Eastern Region (NER) is being charged based on Uniform Common Pooled Transmission Tariff (UCPTT), which is in terms of paise per kWh, operational in the NER since 1992. The present UCPTT rate of 35 paise/kWh is effective from 1996. The transmission charges collected based on UCPTT rate are apportioned among Power Grid Corporation of India Ltd. (the first respondent in these petitions) and the State Utilities, whose assets form part of the Common Pool of transmission assets in NER. After constitution of the Commission in 1998, petitions were filed by the first respondent for approval of tariff for certain newly commissioned assets in NER. In one such case (Petition No. 40/2000), the Commission decided to continue the UCPTT rate of 35 paise/kWh up to 31.3.2004 in view of the surplus transmission capacity not being made use of by the State Utilities. The relevant excerpts of the Commission's order dated 1.2.2002 in petition No 40/2000 are given hereunder:

*“12. The transmission schemes in respect of which tariff approval has been sought were approved by the Central Government to match with the future generation of power by NEEPCO. It is on record that except Kathalguri gas plant, no other generating plant connected with these transmission schemes had been put to commercial operation by 1.2.2000, the date from which tariff has been claimed by the petitioner. There is thus an excess of transmission capacity and the respondents are not deriving any benefit out of such excess capacity. Under these circumstances, the respondents cannot be made liable to pay the transmission charges for the excess capacity. In fact, from the petition itself we find that PIB, while approving the revised cost estimates for Kathalguri transmission system, advised the petitioner to enter into a back-to-back commercial agreement with the generating utility and seek grant/compensation in case of delay or non-commissioning of the unit as per schedule. It becomes evident that even PIB did not intend the respondents to be burdened with extra tariff because of non-availability of generation commensurate with the transmission capacity. Therefore, tariff of these transmission schemes cannot be fixed under the notification dated 16.12.97.*

*13. In the light of the foregoing, we direct that the respondents shall be liable to pay the transmission charges @ 35 paise/kwh of the power transmitted in the region. This tariff shall be applicable from 1.2.2000 to a period up to 31.3.2004 or till such time the power generation matching the transmission capacity is available, whichever is earlier. However, we wish to advise the Central Government to finalise an appropriate relief package for the NE region. If the Central Government finalise relief package, then the difference between actual tariff and the tariff of 35 paise/kwh which we have ordered, shall be provided from the relief package to the petitioner. If this does not happen, petitioner would have to bear the difference. We expect that the petitioner, however, would pursue the matter and obtain an early favourable decision from the Central Government. The petitioner may get this petition revived in that eventuality. As a corollary of this direction, the petitioner need not file transmission tariff petitions for any other transmission system in the region since other transmission systems get covered by these directions, which are in the context of the power transmitted and not based on the terms and conditions notified by the Ministry of Power on 16.12.1997”.*

3. After implementation of ABT in the NER from 1.11.2003, the first respondent felt that transmission charges based on per kWh of energy did not fit well into ABT mechanism. Therefore, petition No.13/2004, was filed by the first respondent wherein, it was, *inter alia*, prayed that the annual transmission charges should be calculated by multiplying the total ex-bus design/target energy

of the central sector generating stations in the NER by UCPTT rate of 35 paise/kWh and these charges should be shared between the constituents of the NER in proportion of their allocation of power. The suggested method was based on the premise that actual generation at the central sector generating stations in the NER was much below their installed capacity and this was affecting the revenue of the petitioner since the transmission system in the region was commissioned after taking into account the installed capacity. The Commission vide order dated 6.9.2004 in the said petition, issued the directions, as summarized below:

- (a) With effect from 1.11.2003, and till the date UCPTT continues, regional transmission charges in the NER shall be paid by the under-drawing beneficiaries according to their respective scheduled energy drawal from the central sector generating stations.
- (b) The over-drawing beneficiaries, and those importing power from outside the NER under an agreement shall pay the regional transmission charges according to their actual energy drawal.
- (c) In case a central sector generating station injects energy into the NER grid in excess of that scheduled by the beneficiaries, either on account of a bilateral sale or as UI, the central sector generating station shall pay the UCPTT rate on such excess energy.
- (d) No further "open access" transmission charges for the NER regional system shall be payable for wheeling of the energy on which the UCPTT rate is paid

4. These petitions are filed for review of the aforesaid directions contained in the order dated 6.9.2004. We proceed to discuss the issues raised by the petitioners in these petitions, reply of the respondents and our findings thereon.

## Over-recovery

5. In petition 189/2004, the petitioner, ASEB has sought review of the order dated 6.9.2004 on the ground that it leads to over-charging and higher recovery by the first respondent. The petitioner has sought to explain the point by showing different conditions of schedule and drawal of four states in the region and their impact on payment of transmission charges as per the order dated 6.9.2004, as hereunder:

State	Entitlement based on Declared Capacity	Schedule	Actual Drawal	Transmission charge payable for
A	100 MU	100 MU	140 MU	140 MU
B	100 MU	90 MU	60 MU	90 MU
C	60 MU	50 MU	60 MU	60 MU
D	40 MU	40 MU	40 MU	40 MU
<b>TOTAL</b>	<b>300 MU</b>	<b>280 MU</b>	<b>300 MU</b>	<b>330 MU</b>

6. The petitioner has contended that with the implementation of directions contained in order dated 6.9.2004, as against total entitlement based on declared capacity of 300 MUs and schedule of 280 MUs the first respondent earns transmission charges on 330 MUs of energy, against actual transmitted energy of 300 MUs only. In the light of the above, the petitioner, ASEB has prayed that with effect from 1.11.2003 and till continuation of UCPTT, transmission charges in NER needs to be applied based on scheduled energy, irrespective of the actual drawal by the beneficiaries.

7. In petition No. 2/2005, the petitioner, NEEPCO has submitted that the guidelines contained in the order dated 6.9.2004 were discussed in 49<sup>th</sup> Commercial Committee meeting of the NER held on 8.10.2004 where it was resolved that there should not be double billing in any case. According to this petitioner, payment of UCPTT rate by central sector generating stations on injection of excess energy is

justified only if such excess energy is generated on account of bilateral arrangement between the concerned generating station and a beneficiary outside the NER or a trader. It has been contended that with the implementation of the order dated 6.9.2004, net UI charges receivables by a central sector generating station in the NER on account of generation beyond schedule shall now stand reduced by an amount of 35 paise for each unit generated in excess of the schedule. Further, threshold frequency, that is, frequency below which it is commercially viable for a generator to inject UI energy would be lowered by 0.12 Hz. The petitioner has submitted that there is no provision for payment of transmission charges by a generating station on injection of UI, in any other region of the country. The petitioner has expressed an apprehension that a situation may arise where in order to avoid spilling of water at a hydro generating station for generating zero cost energy beyond schedule it would be forced to pay the transmission charge. This may happen if frequency in the grid is about 50.38 Hz when the UI rate is less than the UCPTT rate of 35 paise/unit. The issue of double charging by the first respondent raised by the petitioner in petition 189/2004 has also been raised by the petitioner in the present petition. The petitioner has urged that by virtue of the decision, when a central sector generating station generates in excess of schedule and such excess energy is overdrawn by the beneficiaries of the NER, both, the generator as well as the beneficiaries have to pay transmission charges, leading to double payment for the quantum of energy generated in excess of the schedule. Accordingly, the petitioner has prayed for review of the order dated 6.9.2004 and seeks exemption from payment of the regional transmission charges on energy injected into the grid as UI in excess of the schedule.

8. In response to the issue raised in Petition No.189/2004, the first respondent has submitted that despite the Commission's order dated 6.9.2004, it is not able to recover the transmission charges calculated based on the norms laid down by the Commission and is incurring huge revenue losses due to continuation of the UCPTT rate. According to the first respondent, the direction contained in the order dated 6.9.2004 could marginally improve its revenue realisation. Therefore, the first respondent has prayed for continuation of the principles for recovery of the transmission charges till the existing scheme of the UCPTT rate in the NER is replaced by Annual Transmission Charge (ATC) concept applicable in other regions.

9. In its reply to petition No. 2/2005, the first respondent has contended that even after implementation of ABT in NER, declared capacity of the generating stations belonging to the petitioner therein is much below the design/target energy of the respective generating station which is seriously affecting its revenue realization, though the petitioner is often earning UI charges by generating above schedule. The first respondent has, therefore, submitted that the order of the Commission requiring generating companies to pay UI charges for energy injected in excess of schedule is justified.

10. We have considered the rival contentions on the above-mentioned issue. In other regions, the transmission charges are determined primarily based on the norms notified by the Commission, which, inter alia, take into consideration the investment (subject to prudence check by the Commission) made for creation of the regional transmission system. Because of the peculiar circumstances obtaining in the NER, the transmission charges for this region are not determined

based on these norms, since otherwise the transmission charges may work out to around 90 paise/kWh. Therefore, in case of the NER, pooled transmission charges are being applied @ 35 paise/kWh under UCPTT. The charges payable to the first respondent get further reduced because of sharing of a portion of these charges recovered, by the State Utilities contributing to the common pool. The amount received by the first respondent from the de-pooling of the transmission charges is not commensurate with the investment made by it. Against this background, we have considered the issue afresh on merits, and without limiting our considerations to the principles applicable to review of orders under the Code of the Civil Procedure. We have analysed options available to us for sharing of the transmission charges with a desire to do justice to the parties.

The options examined are as under:

- (i) Sharing of charges based on actual drawal as was the practice prior to implementation of ABT in the NER,
- (ii) Sharing of charges based on scheduled energy as suggested by ASEB in its petition, and
- (iii) Continuation of sharing of charges as per order dated 6.9.2004.

11. In our opinion, sharing of transmission charges based on actual energy drawal is not a fair proposition. The transmission system in the NER, and in other regions as well, is primarily created for conveyance of electricity corresponding to the installed capacity in the region and to facilitate delivery of entitlement (allocation in MW) of each beneficiary from central sector generating stations. Ideally, the owner of the transmission system, the first respondent in the present case, deserves to be compensated for the investment made, irrespective of the energy flows. This is precisely the manner in which transmission charges are shared by the beneficiaries in other regions. However, this requires determination



of total transmission charges, that is, total transmission charges payable to the first respondent based on the investment made. In contrast, in case of the NER, total transmission charges payable to the first respondent have not been determined for the reasons mentioned hereinabove. Instead, in the NER, transmission charge liability of the individual beneficiary is determined first and these liabilities are then added to arrive at the total amount receivable. This special dispensation for the NER was made in view of the excess transmission capacity available in the region. Prior to implementation of ABT, actual usage by individual beneficiary was judged by the energy drawn by that beneficiary. The continuance of this system is unfair to the first respondent, if actual drawal of a beneficiary is less than its scheduled drawal, because the transmission system has to be kept in readiness by the first respondent to deliver the scheduled energy. Therefore, the scheduled drawal from the central sector generating stations appears to be much better criterion for arriving at the usage by individual beneficiaries. The scheduled drawal was not thought of as measure of actual usage prior to ABT, because in the absence of any commercial implications, the schedules were of not much significance at that time. The scheduled drawal will also have better correlation (as compared to actual drawal) with entitlement, which as already explained, should be the ideal basis for sharing of the transmission charges. However, if actual drawal is more than the scheduled drawal, it is logical to apply the transmission charges based on actual drawal because the transmission system maintained and operated by the first respondent was able to support and was used for such drawal, even though it exceeded the scheduled drawal. Therefore, we have come to the conclusion that the directions contained in our order dated 6.9.2004 to the effect that

beneficiaries shall pay transmission charges based on scheduled drawal from CGS or actual drawal, whichever is higher, is just and fair.

12. The order dated 6.9.2004 also stipulated that the central sector generating stations will have to pay the transmission charges on energy injected in excess of the generation scheduled by the beneficiaries in the NER. This was stipulated to mainly take care of bilateral sale by the central sector generating stations to the entities outside the NER. In such cases, the total schedule to the central sector generating stations (say A Mus) will be more than the schedule given by the NER beneficiaries (say B Mus) and the difference (A-B) MUs will be energy scheduled for drawal by an entity outside the NER. If the central sector generating station is able to generate C MUs, which is in excess of A, as per the order dated 6.9.2004, it will have to pay transmission charges for energy quantum of (C-B) MUs and UI charges for (C-A) MUs. There should be no doubt that additional transmission charges for use of the NER system for export of energy outside the region, whether under a bilateral sale or as UI, should be payable. The order dated 6.9.2004 ensures that these charges are paid by the central sector generating stations generating in excess of the schedule for NER beneficiaries. Needless to say, the central sector generating stations can always factor these charges into the rate charged from the entity importing the power generated. Even NEEPCO has admitted that transmission charges on the central sector generating stations are justified, if excess injection is on account of bilateral sale. There is no reason why their injection as UI should not attract a similar transmission charge. We are conscious of the fact that if generation level maintained by the central sector generating stations is above the total generation scheduled, application of transmission charges on the central sector generating

stations brings down effective UI rate by 35 paise /kWh (UCPTT Rate). However, in our opinion, lower effective UI rate does not indicate unfair treatment to the central sector generating stations in the NER, because their over-generation increases transmission losses in ER and over-loading of ER-WR link, and therefore should not be unduly encouraged. Based on the above analysis, we have come to the conclusion that our direction in the order dated 6.9.2004 on the issue of applying transmission charges to the central sector generating stations does not call for any review.

13. On the issue of “double charging”, we have already come to the conclusion that application of transmission charges as per directions contained in order dated 6.9.2004 is not unfair to any individual beneficiary or the central sector generating stations in the NER. It is also a fact that the first respondent is not getting revenues commensurate with the investment and, therefore, the perception that the directions contained in order dated 6.9.2004 are leading to over-recovery by the first respondent is misplaced.

**Application of NER transmission charges on import over 220 kV Birpara-Salakati (PG) line**

14. ASEB in its petition has submitted that the NER is connected with other regions of the country through two links. One is 400 kV D/C Bongaigaon-Malda line which is inter-regional link and the other is 220 kV D/C Birpara-Salakati (PG) line which is an ER transmission asset. ASEB has also stated that it is directly connected with 220 kV D/C Birpara-Salakati link at its Salakati bus through its own network (However, it is noted that actually, from Salakati there is a 220 KV D/C transmission line owned by the first respondent connecting it to Bongaigaon TPS of ASEB). It is further stated that prior to this order, the NER transmission

charge was payable by Contract Path method, if the NER network was used for wheeling of energy. However, as per order dated 6.9.2004, if ASEB imports energy from outside the NER even through 220 kV Birpara-Salakati link (which is part of ER network and does not involve any NER asset), it is required to pay transmission charge in addition to payment of the ER transmission charge. This, according to ASEB is unjustified. The petitioner, ASEB has, therefore, prayed that the NER regional transmission charge on additional energy imported by ASEB from outside the region may not be charged as ASEB imports such power through 220 KV Birpara-Salakati ER asset.

15. The first respondent has objected to statement of ASEB to the effect that prior to this order the charges for use of the NER system were being paid based on Contract Path method. According to the first respondent, the NER transmission charges are not applied based on location but are payable on pool basis. The first respondent has stated that earlier ASEB could draw power from Farakka STPS in the ER only by paying the ER transmission charges as a special case based on decision of the Central Government. It has also been contended by the first respondent that after withdrawal of allocation to ASEB from Farakka STPS and after commissioning of its own lines in the NER, ASEB is required to pay the transmission charges for the NER for drawal of power from the ER.

16. In our opinion, contention of ASEB regarding application for the NER transmission charges on import from outside the region cannot be accepted as import by ASEB, through physical flow or displacement, may take place over the two parallel paths, that is, 220 kV D/C Birpara- Salakati transmission line and 400

kV D/C Malda-Bongaigaon transmission line. Therefore, one cannot say that entire import is taking place through Birpara-Salakati link only. Since power imported over 400 kV Malda-Bongaigaon transmission line will necessarily flow through the NER regional network, we have come to the conclusion that application of the NER transmission charges on such import is in order.

### **Sharing of benefits of over-generation**

17. ASEB in its petition has further contended that the generators cannot be allowed under the present system of recovery of fixed cost to generate in excess of the declared capacity (DC) and earn directly from the beneficiary through UI/bilateral exchange. In such cases, it would amount to gaming by the generators for earning extra at the cost of the beneficiaries. ASEB has prayed for passing orders to the effect that where the generators generate and sell energy beyond the said limit, any profits earned from such generation and sale have to be shared with the beneficiaries.

18. NHPC in its reply has opposed the contention of ASEB. NHPC has contended that preventing generating companies from generating beyond declared capacity shall defeat the objective of ABT. This will discourage the generating companies from helping the grid when system frequency falls. Further, according to NHPC, the prayer of ASEB regarding sharing of profits for generation beyond declared capacity is baseless, arbitrary unjustified and not in conformity with terms and conditions of tariff issued by the Commission.

19. We do not find any merit in the contention of ASEB that the generators should share with the beneficiaries, profit earned through over generation. The

provision relating to thermal generation in clause (2) of regulation 24 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004 and the position relating to hydro power generation in clause (2) of regulation 42 of the said regulations, not only set the limit for generation above schedule but also provide for investigation by RLDC concerning the gaming aspect. We do not find any need to issue additional directions on the issue.

### **Uniform National Transmission Tariff**

20. The petitioner, ASEB has prayed that considering the highest transmission rate of the NER compared to rest of the country, the Commission may advise the Government of India under clause (i) of sub-section (2) of section 79 of the Electricity Act, 2003 for immediate implementation of Uniform National Transmission Tariff with the aim to levelise the transmission tariff through out the country.

21. On this issue, we would like to state that the Commission after extensive deliberation has decided to continue with the regional postage stamp method for the transmission charges, which forms part of the Commission's notification dated 26.3.2004 for the tariff period 2004-09. The National Electricity Policy and Tariff Policy have been notified by Government of India. These policies suggest that transmission tariff should be sensitive to distance, direction and related to quantum of flow. Therefore, the concept of Uniform National Transmission tariff suggested by ASEB cannot be accepted at this stage.

## **Continuation of open access transmission charges in NER**

22. Lastly, ASEB has submitted that because of withdrawal of short-term open access rates for the NER system, the NER beneficiaries have to pay full UCPTT rate i.e. 35 paise/kWh on entire energy imported, whereas earlier the beneficiaries were required to pay only 1/4<sup>th</sup> of the UCPTT rate for the same. It has been contended that the order dated 6.9.2004 has imposed extra financial burden on beneficiaries, which will constrain the beneficiaries either to restrict sale of power at higher imported cost or pass on the extra financial burden to the consumers. ASEB has prayed for keeping in vogue the existing Open Access Transmission Charges for the NER for the purpose of enjoying outside energy.

23. Prior to issuance of order dated 6.9.2004, the Commission's regulations on Open Access, required the Central Transmission Utility to notify 25% of UCPTT rate as short-term open access transmission charges in Rs/MW/Day. In view of the order dated 6.9.2004, this provision was deleted while amending Open Access Regulations in February 2005.

24. In the background of conclusions already recorded, it may be noted that:

- (a) The UCPTT rate of 35 paise/kWh payable by long-term transmission customer itself is lower than the rate which will work out if tariff is awarded based on investment made by PGCIL. Therefore specifying a further lower open access short-term rate for the NER transmission system is not warranted.
- (b) As long as transmission charges are applied based on per kWh basis, a separate rate for short-term open access cannot be implemented because drawal from the central sector generating stations and drawal due to bilateral transactions cannot be segregated from the metered drawal for a beneficiary.

- (c) A beneficiary buying power on short-term basis will almost certainly be drawing more than its schedule from the central sector generating stations in the region. Therefore, once transmission charges are applied on actual drawal, there will be no need to apply short-term open access charges.
- (d) A beneficiary selling power on short-term basis will almost certainly be having drawal less than its schedule from the central sector generating stations in the region. Therefore, once transmission charges get applied on scheduled drawal from the central sector generating stations in NER, there will be no need to apply short-term transmission charges.
- (e) If the central sector generating stations sell their power to an entity outside the region, transmission charges are paid by the central sector generating stations and therefore, there will be no need to apply short-term transmission charges.

25. Thus, it may be seen that due to inherent design of the scheme of the transmission charges approved by us, separate short-term transmission charges for NER as in case of other regions, are neither warranted nor can they be implemented.

26. We would also like to point out that analysis and directions contained in this order are based on the peculiarities in the NER particularly the UCPTT rate applied on per kWh basis and capping of this rate at 35 paise/kWh on the ground of existence of excess transmission capacity. This cannot, however, be quoted as precedent in the context of scheme of transmission charges in other regions.

27. Before parting with the order, we would like to point out that in para 13 of the order dated 1.2.2002 in petition No.40/2000, the Commission had directed for continuation of UCPTT tariff up to 31.3.2004 or till such time the power generation



matching the transmission capacity is available, whichever is earlier. In spite of this observation, the first respondent has not filed petitions for determination of tariff for its transmission assets in the NER for the tariff period 2004-09. We would like to have a fresh view on the issues of transmission charges for the assets owned by the first respondent based on the Commission's norms, level of transmission capacity vis-à-vis generation capacity in the NER, need for continuation of UCPTT, etc. We, therefore, direct the first respondent to file petitions covering these aspects within 3 months of issuance of this order.

28. The petition stands disposed of.

Sd/-  
**(A.H. JUNG)**  
**MEMBER**

Sd/-  
**(BHANU BHUSHAN)**  
**MEMBER**

Sd/-  
**(K.N. SINHA)**  
**MEMBER**

Sd/-  
**(ASHOK BASU)**  
**CHAIRPERSON**

**New Delhi dated the 7<sup>th</sup> April 2006**